

1 **Remarks for the “RESPONSE TO NON-FINAL OFFICE**
2 **ACTION DATED 12/14/2005”**

3 Applicant respectfully requests reconsideration and allowance of all of the
4 claims of the application. Claims 1, 3-8, 10-16, and 18-23 are presently pending.
5 Claim amended herein is 16. Claims withdrawn or cancelled herein are none.
6 New claims added herein are none.

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8 **Formal Matters**

9 **Claim Rejections under § 112**

10 The Office stated the following about claim 22:

11 Claim 22 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply
12 with the written description requirement. The claim(s) contains subject matter which
13 was not described in the specification in such a way as to reasonably convey to one
14 skilled in the relevant art that the inventor(s), at the time the application was filed, had
15 possession of the claimed invention. Regarding claim 22, the claim contains “clean
16 interfaces” which was not described in the specification in such a way as to reasonably
17 convey to one skilled in the relevant art that the inventor(s), at the time the application
18 was filed, had possession of the claimed invention. Correction is required.

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20 Applicant submits that the “written description” requirement is fulfilled
21 with regard to claim 22. Page 15 (second full paragraph) of the Application
22 discusses “clean interfaces.” Applicant respectfully asks for the withdrawal of this
23 rejection.
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Substantive Claim Rejections

Claim Rejections under §§ 102 & 103

The Office rejects all of the pending claims under §102 and/or §103. For the reasons set forth below, the Office has not shown that cited references anticipate (under §102) the rejected claims. For the reasons set forth below, the Office has not shown made a *prima facie* case showing that the rejected claims are obvious (under §103). Accordingly, Applicant respectfully requests that the rejections be withdrawn and the case be passed along to issuance.

The Office's rejections are based upon the following references:

- **Krishnan et al.** US Patent No. 6,141,698 (issued 10/31/2000) (hereinafter, "Krishnan"); and/or
- **Eidt et al.** US Patent No. 6,141,698 (issued 6/9/1998) (hereinafter, "Eidt").

Overview of the Application

The Application describes a technology for operating systems and loaders of executable images. Furthermore, the described technology facilitates the adoption and recognition by an operating system of an otherwise unsupported executable-image format. It may do so by increasing the ease with which an executable-image loader may be modified to accommodate for the otherwise unsupported executable-image format.

Cited References

The Office cites **Krishnan** as its primary references in its obviousness-based rejections. The Office cites **Eidt** as its primary references in its anticipation-based rejections and as its secondary reference in its obviousness-based rejection.

Krishnan

Krishnan describes a technology for modifying the behavior of existing executable code by injecting new code into an executable file is provided. The injection mechanism injects a reference to new code contained in a DLL into an existing executable file such that, when the code of the executable file is executed, the DLL is automatically loaded and the new code is automatically executed.

A reference to the DLL is injected into the executable file by either modifying an import table of the file, which causes automatic loading of the DLLs referred to therein, or by adding DLL loader code to the file. The DLLs loader code uses an underlying operating system call to load the DLL. Further, the injection mechanism provides enhanced security by injecting security code and data into the executable file. The injected security code mechanism uses an incremental encryption and decryption process to encrypt and decrypt portions of the executable file in a more secure manner.

Eidt

Eidt describes a technology in which relocation table entries in an executable object code file are interpreted as relocation instructions rather than as

individual specifications for a particular respective relocatable information item. An abstract machine is provided for interpreting the relocation instructions and performing various relocation operations and various control functions for the abstract machine, in response to the relocation instructions.

Certain variables contain information which is referenced and updated in response to certain types of the relocation instructions, thereby obviating the need to include such information as part of each relocation instruction. Certain of the relocation instruction types can also specify a particular relocation operation to be performed on a run of n consecutive relocatable information items, where n is specified as part of the relocation instruction. Certain of these relocation instruction types also consider each information item as including two or more individual relocations of the same or different types to perform, thus effectively specifying a run of n repetitions of a pattern of relocations. Other types of relocation instructions are also made available.

Anticipation Rejections

Based upon *Eidt*

The Office rejects claims 16, 18-21, and 23 under USC § 102(b) as being anticipated by *Eidt*. Applicant respectfully traverses the rejections of these claims. Based on the reasons given below, Applicant asks the Office to withdraw its rejection of these claims.

Claim 16

On page 3 of the Action, the Office indicates the following with regard to this claim:

Regarding claims 16, 19 and 20, Krishnan discloses: a method, a computer-readable medium having computer executable instructions that when executed by a computer for facilitating loading to one or more executable images a varying formats, the method comprising: locating an executable image on a computer media (col. 9, lines 45-60, *Eidt*);

investigating information related to the executable image, thereby identifying the format of the executable image (col. 4, lines 37-55, Krishnan), wherein during the investigating an extensible database of executable-image formats is accessed (col. 10, lines 30-51, *Eidt*);

based upon the identified format of the image, initiating a loader associated with the identified format (col. 10, lines 30-51, *Eidt*); with that loader, loading the executable image into a computer memory (col. 10, lines 30-51, *Eidt*).

The Office bases its anticipation (i.e., § 102) rejection based upon the *Eidt* reference. However, as shown above, the Office cites the **Krishnan** reference (specifically, col.4, lines 37-55) for disclosing at least one element or feature recited in this claim. Since the Office is proffering an anticipation rejection, Applicant assumes herein that the Office intends to cite *Eidt* instead of **Krishnan**.

If Applicant's assumption is incorrect and the Office intends to cite **Krishnan** in this anticipation rejection, then Applicant submits that this

anticipation rejection is invalid because each and every element of this claim is not found in a single reference.¹

Applicant submits that **Eidt** does not anticipate claim 16 because **Eidt** does not disclose “investigating information related to the executable image, thereby identifying the format of the executable image, “during the investigating, an extensible database of executable-image formats is accessed,” or “based upon the identified format of the image, initiating a loader associated with that identified format.”

The Office indicates that col. 4, lines 37-55 of **Eidt** discloses this language recited in this claim: “investigating information related to the executable image, thereby identifying the format of the executable image.” Applicant submits that the cited portion of **Eidt** does not discuss “identifying the format of the executable image” but rather discusses the meaning of “Field Names” in the “Relocation Table” for an executable object code file known as XCOFF. See col. 3, lines 18-21 and thereafter for more the XCOFF format. Indeed, it appears that **Eidt** only discusses one executable-image format, namely the XCOFF format. Therefore, **Eidt** has not need to disclose identifying the format if there is only one.

The Office indicates that col. 10, lines 30-51 of **Eidt** discloses this language recited in this claim: “during the investigating, an extensible database of executable-image formats is accessed.” As mentioned above, **Eidt** only discloses

¹ “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

one executable-image format; therefore, **Eidt** does not disclose multiple formats, nor does it disclose a database of such formats.

The Office indicates that col. 10, lines 30-51 of **Eidt** discloses this language recited in this claim: "based upon the identified format of the image, initiating a loader associated with that identified format." As discussed above, **Eidt** does not disclose identifying a format. Therefore, **Eidt** does not disclose initiating a loader associated with an identified format.

As shown above, **Eidt** does not disclose all of the claimed elements and features of this claim. Accordingly, Applicant asks the Office to withdraw its rejection of this claim.

Claims 18-20

These claims ultimately depend upon independent claim 16. As discussed above, claim 16 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable reasons that are independent to the reasons for the allowability of their base claim.

Claim 21

On page 3 of the Action, the Office indicates the following with regard to this claim:

Regarding claims 21 and 23, Eidt discloses: a computer-readable medium having modularized computer-executable modularized sets of instructions and an operating system comprising a medium that, when executed by the computer, load one or more executable images into a computer memory, such an image having one or more formats

Applicant submits that Eidt does not anticipate claim 21 because Eidt does not disclose that one or more of the loaded images has a format "defined by an extensible database of executable-image formats."

At col. 3, lines 18-21 and thereafter, Eidt discloses only one format for what it calls, "an executable object code file known as XCOFF." Since Eidt only discusses one executable-image format, Eidt does not disclose multiple formats, nor does it disclose a database of such formats.

As shown above, Eidt does not disclose all of the claimed elements and features of this claim. Accordingly, Applicant asks the Office to withdraw its rejection of this claim.

Claims 22-23

These claims ultimately depend upon independent claim 21. As discussed above, claim 21 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all

1 of these claims may also be allowable reasons that are independent to the reasons
2 for the allowability of their base claim.

3 4 **Obviousness Rejections**

5 **Lack of *Prima Facie* Case of Obviousness (MPEP § 2142)**

6 Applicant disagrees with the Office's obviousness rejections. Arguments
7 presented herein point to various aspects of the record to demonstrate that all of
8 the criteria set forth for making a *prima facie* case have not been met.

9 10 **Based upon Krishnan and Eidt**

11 The Office rejects 1, 3-8, 10-15, and 22 under USC § 103(a) as being
12 unpatentable over **Krishnan** in view of **Eidt**. Applicant respectfully traverses the
13 rejections of these claims. Applicant asks the Office to withdraw its rejection of
14 these claims.

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Claim 1

On page 3 of the Action, the Office indicates the following with regard to this claim:

Regarding claim 1, Krishnan discloses: A computer-readable medium having computer-executable modules comprising:

- a file locator configured to locate an executable image on a computer media (col. 6, lines 11-15, Krishnan);
- a memory-mapper configured to open the executable image from the computer media and read it into a computer memory (col. 6, lines 60-65, Krishnan);
- an Importer configured to find a list of executable image names to load;
- a binder configured to link multiple executable images together, such images being those of the list of executable image names ((col. 7, lines 48 to col. 8, lines 5, Krishnan).

However, Krishnan didn't disclose: a file-format recognizer configured to recognize the file format of the executable image from amongst a database of multiple file format definitions ; an exporter configured to build a representation of program modules that an executable image exports. On the other hand, Eidt discloses: a file-format recognizer configured to recognize the file format of the executable image from amongst a database of multiple file format definitions (col. 17, lines 4-19, Eidt), wherein the database is extensible so that additional file format definitions may be added to the database of multiple file format definitions (col. 17, lines 4-19, Eidt); an exporter configured to build a representation of program modules that an executable image exports (col. 9, lines 19-33, Eidt). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include a file-format recognizer and an exporter configured to build a representation of program modules in the system of Krishnan as taught by Eidt. The motivation being to the operating system recognizes the format of executable images and executes the program modules for managing allocation of memory and loading the executable file into memory.

The Office acknowledges that **Krishnan** does not disclose: “a file-format recognizer configured to recognize the file format of the executable image from amongst a database of multiple file format definitions, wherein the database is extensible so that additional file format definitions may be added to the database of multiple file format definitions.” However, the Office indicates that **Eidt** does disclose this.

As discussed above in the response the anticipation rejections, **Eidt** does not disclose multiple executable-image formats; therefore, **Eidt** does not disclose a database of multiple file format definitions. Furthermore, the Office has not identified—with particularity—where **Eidt** discloses a database that is “extensible so that additional file format definitions may be added to the database.”

In addition, Applicant submits that there is no motivation to combine the disclosure of **Eidt** with that of **Krishnan**. The way that Applicant understand the criteria necessary to combine references, there must be some objective suggestion, teaching, or reason given by one reference that would motivate one of ordinary skill in the art at the time of the invention (hereinafter, “OOSA”) to combine it with the teachings of the other reference.

1 The Office's provides the following reasoning that it is proper to combine
2 these references:

3 exports (col. 9, lines 19-33, Eidt). Thus, at the time invention was made, it would have
4 been obvious to a person of ordinary skill in the art to include a file-format recognizer
5 and an exporter configured to build a representation of program modules in the system
6 of Krishnan as taught by Eidt. The motivation being to the operating system recognizes
7 the format of executable images and executes the program modules for managing
8 allocation of memory and loading the executable file into memory.

9
10 The Applicant does not understand the reasoning provided by the Office.
11 Regardless, Applicant submits that reasoning provided by the Office is insufficient
12 motivation for combining these references. Applicant submits that the Office has
13 not provided any objective suggestion, teaching, or reason *given by one reference*
14 that would motivate OOSA to combine it with the teachings of the other reference.

15 As shown above, the combination of Krishnan and Eidt does not disclose
16 all of the claimed elements and features of these claims. Furthermore, the Office
17 has not provided any objective evidence (found in the references) that shows why
18 OOSA would be motivated to combine the teachings of the two references.
19 Accordingly, Applicant asks the Office to withdraw its rejection of this claim.

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21 Claims 2-7

22 These claims ultimately depend upon independent claim 1. As discussed
23 above, claim 1 is allowable. It is axiomatic that any dependent claim which
24 depends from an allowable base claim is also allowable. Additionally, some or all
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1 of these claims may also be allowable reasons that are independent to the reasons
2 for the allowability of their base claim.
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4 Claim 8

5 On page 3 of the Action, the Office indicates the following with regard to
6 this claim:
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8 Regarding claim 8, Krishnan/Krishnan discloses: A computer-readable medium
9 having computer-executable modules comprising: a searcher configured (injection
10 mechanism) to search a computer media (space) for an executable image (301, fig. 3,
11 Krishnan) for loading (col. 7, lines 22-27, Krishnan);

12 a format recognizer configured to the format of the executable image (col. 6, lines
13 20-27, Krishnan);

14 a memory-mapper configured to load and map the executable image into
15 memory based upon the format of the executable image (col. 6, lines 60-65, Krishnan);

16 a sub-loader configured to examine a data structure of the executable image to
17 determine whether to load additional images (col. 7, lines 60 to col. 8, lines 1,
18 Krishnan);

19 a database of multiple executable-image formats which is the basis for which the
20 recognizer recognizes the format of executable image and for which the memory-
21 mapper varies how it loads and maps the executable image into memory (col. 17, lines
22 4-41, Eidt), wherein the database is extensible so that additional executable-image
23 formats may be recognized by the recognizer and loaded and mapped by the memory-
24 mapper (col. 17, lines 30-41, Eidt).
25

The Office acknowledges that **Krishnan** does not disclose: “a database of multiple executable-image formats which is the basis for which the recognizer recognizes the format of executable image and for which the memory-mapper varies how it loads and maps the executable image into memory, wherein the database is extensible so that additional executable-image formats may be recognized by the recognizer and loaded and mapped by the memory-mapper.” However, the Office indicates that **Eidt** does disclose this.

As discussed above in the response the anticipation rejections, **Eidt** does not disclose multiple executable-image formats; therefore, **Eidt** does not disclose a database of multiple file format definitions. Furthermore, the Office has not identified—with particularity—where **Eidt** discloses a database that is “extensible so that additional file format definitions may be added to the database.”

The Office cites col. 17, lines 4-41 of **Eidt** for disclosing an “extensible database of multiple file format definitions.” However, Applicant submits that the cited portion of **Eidt** does not discuss an “extensible database of multiple file format definitions” but rather discusses the components (e.g., tables, symbols, and names) employed by a single executable object code file known as XCOFF. See col. 3, lines 18-21 and thereafter for more the XCOFF format. Indeed, it appears that **Eidt** only discusses one executable-image format, namely the XCOFF format. Therefore, **Eidt** has no need to disclose identifying the format if there is only one.

In addition, Applicant submits that there is no motivation to combine the disclosure of **Eidt** with that of **Krishnan**. The way that Applicant understand the criteria necessary to combine references, there must be some objective suggestion, teaching, or reason given by one reference that would motivate one of ordinary

1 skill in the art at the time of the invention (hereinafter, "OOSA") to combine it
2 with the teachings of the other reference.

3 On p. 5 of the Action, the Office's provides the following reasoning that it
4 is proper to combine these references. This is discussed above.

5 The Applicant does not understand the reasoning provided by the Office.
6 Regardless, Applicant submits that reasoning provided by the Office is insufficient
7 motivation for combining these references. Applicant submits that the Office has
8 not provided any objective suggestion, teaching, or reason *given by one reference*
9 that would motivate OOSA to combine it with the teachings of the other reference.

10 As shown above, the combination of **Krishnan** and **Eidt** does not disclose
11 all of the claimed elements and features of these claims. Furthermore, the Office
12 has not provided any objective evidence (found in the references) that shows why
13 OOSA would be motivated to combine the teachings of the two references.
14 Accordingly, Applicant asks the Office to withdraw its rejection of this claim.

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16 Claims 9-15

17 These claims ultimately depend upon independent claim 8. As discussed
18 above, claim 8 is allowable. It is axiomatic that any dependent claim which
19 depends from an allowable base claim is also allowable. Additionally, some or all
20 of these claims may also be allowable reasons that are independent to the reasons
21 for the allowability of their base claim.
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Claim 22

This claim ultimately depends upon independent claim 21. As discussed above, claim 21 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable reasons that are independent to the reasons for the allowability of their base claim.

1 **Dependent Claims**

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3 In addition to its own merits, each dependent claim is allowable for the
4 same reasons that its base claim is allowable. Applicant submits that the Office
5 withdraw the rejection of each dependent claim where its base claim is allowable.

6 **Conclusion**

7
8 All pending claims are in condition for allowance. Applicant respectfully
9 requests reconsideration and prompt issuance of the application. If any issues
10 remain that prevent issuance of this application, the Office is urged to contact the
11 undersigned attorney before issuing a subsequent Action.

12
13 Respectfully Submitted,

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15 Dated: 3-14-06

16
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